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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,558	04/14/2004	Jere Wade	251618US8X	4820

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EXAMINER

HYEON, HAE M

ART UNIT PAPER NUMBER

2839

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/823,558

Applicant(s)

WADE ET AL.

Examiner

Hae M. Hyeon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7-14-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Inventorship***

1. In view of the papers filed on January 10, 2005, it has been found that this nonprovisional application, as filed, through error and without deceptive intent, improperly set forth the inventorship, and accordingly, this application has been corrected in compliance with 37 CFR 1.48(a). The inventorship of this application has been changed by adding the inventor named Tetsuya Okada.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of Office records to reflect the inventorship as corrected.

### ***Specification***

2. The disclosure is objected to because of the following informalities:
- In the specification, the reference numbers have lower case letters, but in the drawings, the reference numbers have upper case letters. The reference number in the specification and the drawings should be corresponding to each other.
  - On page 8, lines 13 and 15, "through hole 310c" should be -- through hole 310d --.
  - The last line on page 11, "the through holes 210d" should be -- the through holes 310d --. Appropriate correction is required.
3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

*Claim Objections*

4. Claim 16 is objected to because of the following informalities: Claim 16, line 2, the examiner suggests the applicant to change "said upper stationary flange" to -- said stationary upper flange -- in order to have consistent terminology.

Appropriate correction is required.

5. Claim 20 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim 20 has not been further treated on the merits.

*Claim Rejections - 35 USC § 112*

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

7. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claim 25 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed April 14, 2004. In that paper, applicant has stated U-shaped portion visible from the window indicates the neutral position of the first part relative to the second part, and this statement indicates that the invention is different from what is defined in the claim(s) because claim 25 is simply reciting **a feature** of the cable being visible instead of reciting the U-shaped portion of the flexible cable. Since it is not clear what is "The feature" recited in claim 25, it can be interpreted as any portion of the cable. According to the present specification, however, any portion of the cable does not indicate the neutral position of the rotary connector. The neutral

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position occurs only when the U-shaped portion of the cable is visible through the window.

Thus, claim 25 is not claiming the instant invention correctly.

8. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In claims 1, 19 and 20, it is not clear what is the feature of the cable.
- Claim 22 recites that the flexible cable is visible from an exterior of the rotary connector, but it is not clear how is the flexible cable visible. What makes the flexible cable visible through the exterior of the rotary connector?

9. Claims 1 and 24-25 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the first and second parts, the cable, the viewing window, and the interior annular space.

- Claims 1 and 24 do simply recite that the cable is within the rotary connector, but the claims do not recite how the viewing windows and the cable are structurally work together with the first part (stationary case) and the second part (rotating case) to for the rotary connector.
- Claim 25 does not recite how the first and second parts are related to the interior annular space. How did the interior space formed?

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 2, 14, 19-22, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Shibata et al (5,409,389).

Shibata discloses a rotary connector comprising a first part (stationary case) 115, a second part (rotating case) 113 having a window 131, and a flexible cable 111. The second part 113 is configured to rotate relative to the first part 115. The cable 111 is placed in an interior space formed by the first 115 and second 113 parts. The rotary connector also includes a guide ring 121 for properly positioning the cable 111 in the rotary connector. The guide ring 121 has an indication portion 129. The guide ring 121 and the cable 111 together form a feature 129 for indicating a neutral position of the rotary connector, which can be view through the window 131.

12. Claims 1, 2, 14, 19-22, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Koyata et al (JP-2000048924 A).

Koyata discloses a rotary connector 1 comprising a first part (stationary case) 3, a second part (rotating case) 2 having a window 3d, and a flexible cable 4. The second part 2 is configured to rotate relative to the first part 3. The cable 4 is placed in an interior space S formed by the first 3 and second 2 parts. Through the window 3d, a feature 5a (an indicator in

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contact with the cable) of the cable 4 can be view to determine a neutral position of the rotary connector 1.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 5-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al in view of Ueno et al (5,257,943).

Claims 5-14 recites electrical junctions and different form of the cable, but Shibata does not show the junctions of the rotary connector and the specific form of the cable. However, the junctions of the rotary connector are commonly known elements in the rotary connector and the use of different types of the cables is also known.

Ueno discloses a rotary connector 1 comprising a first stationary part 11 having a junction 11c and a second rotating part 10 having a junction 10d. Furthermore, Ueno discloses three different types of cables 20-21 for use with the rotary connector 1.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the rotary connector taught by Shibata such that it would have junctions and different types of the cables as taught by Ueno because the junctions and the different types of cables are already known in the art and they do not change or affect the function of the rotary connector.

*Allowable Subject Matter*

15. Claims 3, 4, 15-18 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter: None of the cited prior arts shows the rotating case having a rotating through hole that overlaps with a through hole on a stationary case to view U-shape feature of the flexible flat cable to determine a neutral position of the rotary connector.

*Conclusion*

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 5,310,356 by Obata et al., US Patent No. 5,314,344 by Ida et al., US Patent No. 5,637,005 by Bannai et al., US Patent No. 6,299,453 B2 by Matsumoto, and US Patent No. 6,471,529 B2 by Oishi.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M. Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon  
Primary Examiner  
Art Unit 2839

hnh

*hnh*

*Hae Moon Hyeon*